1. INTRODUCTION

This operation instruction manual conforms to the requirements of the 98/37/EEC Machine Directives and subsequent amendments.
In the light of this, special attention has been given to safety aspects and accident prevention in the work-place for each stage in the machine's "life". Information which could be of particular assistance to the operator has been highlighted.
The "Operating instructions" are an integral part of the machine and should be consulted before, during and after the start up of the machine and whenever else required. The content of these instructions should always be carefully observed.
The observance of the above is the only way to achieve the two fundamental aims of this manual:

- **Optimisation of machine performance**
- **Prevent damage to the machine and injury to the operator**

The index of the chapters and the index of the drawings, diagrams and tables are contained in chapter 3 and can be used to help the location of specific information.

CAUTION: BEFORE INSTALLING THE MACHINE, READ THE OPERATING INSTRUCTIONS CAREFULLY

2. INFORMATION ABOUT MAINTENANCE ASSISTANCE

2.1 GUARANTEE

- MIVA. products are guaranteed against material and manufacturing defects for a period of 12 months from the date of delivery or, if the machine is installed by MIVA employees, from the date of machine start up.
- The buyer is only entitled to the replacement of parts which are acknowledged as faulty: carriage and packing are at the buyer's expense.In the event of the above, the following information should be supplied:

1. Date and number of purchasing document
2. Machine model
3. Serial number
4. Code of any relevant drawings

- Requests for compensation for the inactivity of the machine will not be accepted.
- The guarantee does not cover uses which are not in line with these operating instructions which are an integral part of the machine. Nor is maintenance covered if the instructions supplied are not observed.
- The guarantee will not cover machines which have undergone unauthorized modifications.
- Modification or tampering with the safety devices is strictly forbidden.

3. INDEX

3.1 INDEX OF CHAPTERS

Chap. 1 Introduction
Chap. 2 Information about maintenance assistance
Chap. 3 Index of chapters, drawings, diagrams and tables
Chap. 4 Description of the machine
Safety standards complied with during the design and construction of the machine
Description of the machine and its components
Chap. 5 Main technical data
Chap. 6 Handling and transportation
Chap. 7 Installation
Chap. 8 Start up and operation
Devices and their location
Tools supplied
Operation
Special safety checks
General safety rules
Measures to prevent residual risks
Chap. 9 Maintenance and repairs
General safety measures
Routine checks and maintenance
Description of routine maintenance
Chap. 10 Information regarding environmental noise
Chap. 11 List of spare parts
Chap 12 Laying of - Demolition

3.2 INDEX OF DRAWINGS, DIAGRAMS AND TABLES

ENCL. TYPE	DESCRIPTION	ENCL No.	CHAP.
Table	**Choice of circular blade**	**1**	**8.3**
Drawings	**Handling and transportation- Installation plan**	**2**	**6/7/8**
Drawings	**Electrical details**	**2**	**7**
Diagram	**Electrical installation**	**3**	
Drawings	**Motor-blade block**	**4**	**7/8.3/9**
Drawings	**Base block and vice**	**4**	**8.3/9.3**
Drawing	**Machine assembly**	**5**	**8.3**

4. DESCRIPTION OF THE MACHINE

4.1 SAFETY STANDARDS COMPLIED WITH DURING THE DESIGN AND CONSTRUCTION OF THE MACHINE

The machine produced by us is in compliance with:

- **98/37/EEC Machinery Directive** (ex 89/392/EEC, as amended by the 91/368/EEC, 93/44/EEC and 93/68/EEC Directives).

The following Standards apply:

- EN 292-1 1991 Safety of machinery - Basic concepts and general principles for design. Basic terminology and methods.
- EN 292-2 1991 Safety of machinery. Basic concepts and general principles for design. Specifications and technical principles.
- EN 418 1994 Safety of machinery. Emergency stop devices, functional aspects - design principles.
- EN 983 1996 Safety requirements related to systems and components for hydraulis and pneumatic transmissions.
- EN 1037 1995 Safety of machinery. Isolation and energy dissipation. Prevention of unexpected start-up.
- EN 1088 1995 Safety of machinery - Interlocking devices with and without guard - locking. General principles and provisions for design.
- EN 60204-1 1998 Safety of machinery. Electrical equipment of machines. Part 1 : General requirements Sa
- EN 60204-2 1990 Electrical equipment of industrial machines. Part 2: Item designation and examples of Drwg.ings, diagrams, tables and instructions.
- EN 31202 Noise measurement at the operator's position

- **89/336/EEC Directive on electromagnetic compatibility**, as amended by the 92/31/EEC, 96/68/EEC, 93/97/EEC and 93/68/EEC

The following Standards apply:

- EN 50081-1 General Standard for emission levels
- EN 50082-1 General Standard for immunity

- **73/23/EEC Low Voltage Directive**, **as amended by the 93/68/EEC Directive**

4.2 DESCRIPTION OF THE MACHINE AND ITS COMPONENTS

The 250 cutting-off machine with circular blade for ferrous metals produced by MIVA is made from a solid casting, carefully processed and provided with holes for fastening to a bench or pedestal. The upper surface, designed to allow the complete draining away of the cutting fluid, has been processed using precision machinery to allow the attachment of a sturdy vice with burr-proof jaws.

The bar-stop device allows the length required to be preset and a constant level of performance for repeated cuts.

The blade-holding head is firmly attached to a reduction unit in oil bath built onto the motor and to the base by means of a joint which provides 45° rotation both to the left and right and the cutting movement with manual feed.

The coolant pump is also securely attached to the motor block.

The main switch is located above the motor block. Another switch is used to select motor rotation speed and therefore cutting speed.

The control lever, fitted with an ergonomic hand-grip and blade activation button with safety release action, reduces fatigue during operation to a minimum.

The blade is protected by a guard which in its turn protects the operator from ejected shavings and coolant.

The machine is supplied with a set of service spanners.

4.3 INTENDED AND UNSUITABLE USES OF THE MACHINE

The 250 cutting-off machine with circular blade has been designed and built to cut bars, structural steel and ferrous metal pipes in accordance with the instructions contained in this manual.

Therefore, the cutting of other materials is not permitted: if the above recommendations are not observed, the machine could be damaged and the health and safety of the operator put at risk.

Cutting is not permitted, if the bar has not been first locked in the vice.

5. MAIN TECHNICAL DATA

Under no circumstances should the following data be altered, this is in order to protect the correct functioning of the machine and to avoid creating safety risks for the operator.

MOTOR Motor Power Motor revolutions (two speeds)	three-phase or single-phase three-phase KW 0,95/1,32 - single-phase KW 0,9 1400-2800 rpm
CIRCULAR BLADE (SAW) Maximum diameter and thickness	Number of teeth and feed holes according to table Diameter: 250 mm Thickness: 2
BLADE REVOLUTIONS per minute	52-104 rpm
CUTTING ANGLE	45° right - 45° left
PIECE LOCKING VICE: MAX OPENING	100 mm
COOLANT TANK CAPACITY	litres 3
MACHINE WEIGHT	85 kg - 833,5 N

6. HANDLING AND TRANSPORTATION

For safe handling and transportation use a lift truck for movement indoors or a bridge crane; in this case, also using cables fastened to the sling positions indicated on the drawing 1 Encl. 2. Keep the machine in its normal position and avoid turning it upside down. **If the machine is fastened to the pedestal, stability will be greatly reduced and therefore all the necessary measures should be taken to stop the machine from tipping over.**

All handling and transportation operations should be carried out by trained staff.

7. MACHINE INSTALLATION

A. MACHINE CHECK AND CONTROL LEVER ASSEMBLY

The machine should be checked to make sure that it has not been damaged during transportation and handling.

Control lever assembly (drawing 4. Encl. 2) : Fit the supplied head lever 22, into position 21 and fasten it by means of the nut 86. To fit the handle, connect the electric cable terminals 220 to the microswitch 218 and place it in the left second half of the handle as shown in draw. 4 Encl.2. Then insert the button 222 and the lever 22. Complete the assembly using the screws 221 and then 219. Make sure that the cable is inserted into the lever slot 22, after having checked that there are no burrs or sharp edges in the slot.

B. FASTENING OF THE MACHINE

The machine will be able to operate in keeping with the technical parameters supplied by MI.VA. if it is positioned correctly and fastened securely to the bench or the factory floor so that vibrations are minimal during operation . Consult drawing 2 250 Installation plan Encl. 2.

C. ASSEMBLY OF CIRCULAR BLADE

For the assembly of the circular blade, remove the screw No. 52 (Draw. 6 Encl. 4), keeping the motor-blade block raised and rotate the mobile guard 76 backwards. Unscrew the screw 25 clockwise, withdraw the flange 27, insert the circular blade, making sure that the toothing faces the same direction as the arrow on the mobile guard. Then refit flange 27 and screw 25.

D. ELECTRICAL CONNECTION TO THE MAINS

Install a differential thermomagnetic switch with characteristics suited to the mains.

Make sure that the power supply voltage corresponds to the voltage on the motor plate. Connect the cable to the power supply line observing the colour codes of the individual wires, pay particular attention to the earth wire. Connect the machine, make sure that the rotation of the circular blade is in the direction shown by the arrow on the guard.

E. CUTTING COOLANT

For the cooling of the circular blade, fill the tank with emulsible oil obtained from a mixture of water and AGIP ULEX 260 EP oil with a percentage of 5-7%

8. MACHINE START UP AND OPERATION

8.1 DEVICES AND THEIR LOCATION

(The location of the devices described is shown on the 250 installation plan Encl. 2)

Code	212	LOCKABLE MAIN SWITCH
Code	218	START-STOP MICROSWITCH: situated inside the handle located at the end of the control lever and has safety release action.
Code	208	EMERGENCY STOP
Code	37	CUTTING ANGLE DEVICE: to check that cutting inclination is as required
Code	59	LOCKING VICE
Code	45	BAR-STOP
Code	22	CONTROL LEVER WITH HANDLE

8.2 TOOLS SUPPLIED

1	Allen wrench size 3
1	Allen wrench size 4
1	Allen wrench size 5
1	Allen wrench size 6
1	Allen wrench size 14

8.3 OPERATION

CHECKS TO CARRY OUT BEFORE EACH CUT

A. Make sure that the circular blade is fastened securely by means of screw 25 (DRAW.6 ENCL.4)
B. Check that the hand indicates the required cutting angle (vice scale)
C. Make sure that the head and vice are locked by means of the lever 50 (DRAW.7-8 ENCL.4)
D. With the motor off, lower the head and check that at the end of the stroke, the circular blade does not touch the counter-vice 43. If the circular blade does touch, adjust the screw 40 located at the centre of the head support 17 (DRAW.5 ENCL.4)
E. Make sure that the piece to be cut is adequately secured in the vice.
F. Make sure that the coolant is circulating in the machine.

CUTTING OPERATION

A. Before each cutting operation, if the cutting inclination is not as required, correct or change the inclination by placing the bench lever 50 in position 2 (DRAW.8 ENCL.4) and after correction, forcefully turn it to position 1.
B. Clamp the piece to be cut by means of the handwheel 55 (DRAW.7 ENCL.4), turn the main switch 212 and the speed switch 203 to the position required (we recommend No.1), **use the second speed 104 RPM only in case of need and no longer than 5 minutes in 1 hour**. Take hold of the handle 78 located at the end of the head lever and press button 218. The blade will now start turning.
C. Position the blade carefully on the piece to be cut. Then increase the pressure in order to accelerate the cutting operation without using excessive force. To make a series of cuts, position the bar-stop 45 at the size required. Fix it into position by using the knob 46 (DRAW.9 ENCL.5).
D. To replace the circular blade carry out the same operations used to assemble the circular blade. (chapter 7c).
E. For the choice of most suitable blade consult the table ENCL. 1.

We strongly discourage the use of blades with ruined or insufficiently sharp cutting edges

8.4 SPECIAL SAFETY CHECKS

A. Before using the machine, check carefully that the safety devices are in good working order, that the mobile parts are not blocked, that no parts are damaged and that all the components are installed correctly and are functioning properly.

B. Make sure, before operating the machine, that the screws of the guards and other protective devices are adequately secured, especially the screws on the circular blade guard and the rotation levers of the circular blade mobile guard.

C. Check that the safety microswitches and the emergency button are functioning correctly. Test them during a loadless machine cycle.

D. Make sure that the mobile guard does not leave uncovered an angle of more than 5° in order to prevent fingers from entering.

E. Pay attention to environmental conditions. Do not expose the machine to rain; to not use it in damp environments, position the machine on a clean dry floor that has no oil or grease stains.

F. Before using the machine, the operator should make sure that all tools and service spanners used for maintenance or adjustment have been removed.

8.5 GENERAL SAFETY RULES

A. Wear appropriate clothing. The operator's clothing should not be loose or dangling nor should it have parts which could easily get caught. Sleeves should contain elastic.

Belts, rings or chains should not be worn. Long hair should be kept in a net.

B. Avoid unstable operating positions. Find a safe and evenly balanced position to operate the machine.

C. Keep the work area tidy, untidiness increases the risk of accidents.

D. Do not use the power supply cable to disconnect the plug from the socket. Protect the cable from high temperatures, oil or sharp edges. For outdoor use, only use extension cables which are in line with current regulations.

8.6 MEASURES TO PREVENT RESIDUAL RISKS

A. The removal of guards and tampering with the safety devices is strictly forbidden.

B. Gloves should always be worn.

C. Standard work clothing should be used and kept closed and should not have flapping parts.

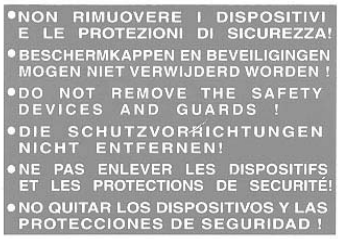
D. The machine should not be cleaned with liquids under pressure.

E. In the event of fire, extinguishers should not be used unless they are the powder type. The electric power supply to the machine should always be disconnected in these circumstances.

F. Do not insert foreign bodies into the motor cover and to not supply the machine with voltage by tampering with the safety microswitches or main switch.

G. Take the necessary precautions to avoid the machine being started by other people during loading, adjustment, piece changing or cleaning.

Safety, Guidance, Notice Labels on the Machine


•NON RIMUOVERE I DISPOSITIVI E LE PROTEZIONI DI SICUREZZA!
•BESCHERMKAPPEN EN BEVEILIGINGEN MOGEN NIET VERWIJDERD WORDEN !
•DO NOT REMOVE THE SAFETY DEVICES AND GUARDS !
•DIE SCHUTZVORRICHTUNGEN NICHT ENTFERNEN!
•NE PAS ENLEVER LES DISPOSITIFS ET LES PROTECTIONS DE SECURITÉ!
•NO QUITAR LOS DISPOSITIVOS Y LAS PROTECCIONES DE SEGURIDAD !

9. MAINTENANCE AND REPAIRS

9.1 GENERAL SAFETY MEASURES

A. Lockable main switch. Open the padlock in the event of machine failure or replacement of the circular blade. The padlock key should be entrusted to a responsible person.

B. Before carrying out any work on electrical equipment, remove the power supply plug from the control panel (disconnect voltage).

C. Only use cables to supply power, which have a cross-section suited to the power of the machine.

D. Opening key. The keys of the machine should be kept by authorized personnel. Do not leave the keys for doors which provide access to the hydraulic or electrical parts or keys to lockable switches in easy of reach of unauthorized personnel.

E. Repairs should only be carried out by authorized personnel. Only spare parts made by the original manufacturer should be used, otherwise these could cause damage or injury.

9.2 ROUTINE CHECKS AND MAINTENANCE

FREQUENCY (working hours)	OPERATION
1000 hours	Replace the oil in the gear box with AGIP ACER 320 oil (0.2 litres) or equivalent.
1000	Lubrication of mobile parts in the piece locking vice (GREASE AGIP MU 2)
50	Cleaning of the coolant tank and filter check
if necessary	Check functioning of bench lever

9.3 DESCRIPTION OF ROUTINE MAINTENANCE

A. Replacement of gear box oil

Remove caps 34 and 90 (draw.5-6 Encl.4), let all the used oil flow out into a container which should have a label indicating the contents for the purposes of disposal. Replace cap 34. Feed 0.2 litres of oil (as specified above) into the oil feed hole located on the upper part of the gear box and then replace cap 90.

B. Lubrication of mobile parts of piece locking vice

Remove jaw 60 (draw.7 Encl.4), withdraw vice 59 completely by turning hand wheel 55. Clean and grease the parts worked by the counter-vice 43 and vice 59. Put a drop of oil in the oil feed hole 61 located behind the handwheel.

C. Cleaning of the coolant tank: Filter check.

Empty the coolant from the tank by means of the tap located on the rear part of the machine bench (after moving the liquid feed pipe away from this). Collect the coolant in a container for future disposal.

Remove screws 64 and the drilled plate 62 (draw.8 Encl.4). Clean out the shavings and the metallic powder, taking care not to scatter this over the machine especially around the motor and the box containing the electrical equipment. Refit the plate 62 and fasten it with screws 64, turn the tap off and reconnect the pipe. Check filter 88 and if necessary replace it. Fill the tank with the amount and liquid stated previously.

D Checking of bench lever functioning

Check regularly that the rotation release - locking lever is working properly. In the event of the lever not locking correctly, loosen grub screw 51 (draw.7 Encl.4), tighten nut 49 and fasten grub screw 51 again. Make sure that with the bench lever in position 2, arm 17 which supports the blade-motor block can rotate freely.

10.INFORMATION REGARDING ENVIRONMENTAL NOISE

An environmental noise test carried out on the 250 cutting-off machine with circular blade, identical to the machine to which these operation instructions refer, has given the following results:

ACOUSTIC RADIATION PRESSURE

1. L_{Aeq} = 83.2 dB (A)
2. L_{peak} = 90.6 dB (the maximum acceptable value is 140 dB).
3. The level of background noise has no influence = 48.5-54.2 dB (A).

11. LIST OF SPARE PARTS

POS.	DESCRIPTION	CODE	POS.	DESCRIPTION	CODE
1	Worm screw fastening nut		61	Oiler	
2	Worm screw	021/05	62	Crucible	037/05
3	Key 5x5x30 DIN 6885		63	Bench tap	042/05
4	Splash guard 25-47-7		64	Screw TCCE 6x55 DIN 912	
5	Bearing 6205 ZZ		65	Nut M 16 Din 936	
6	Rotor		66		
7	Stator		67		
8			68	Screw TCCE 6x20 DIN 912	
9	Head gear	040/05	69	Washer D.6 DIN 125/A	
10	Bearing 6204 ZZ	151/36	70	Screw TCCE 4x12 DIN 912	
11	Bearing 629	043/05	71	Fan guard	
12	Snap ring D.9 DIN 471		72	Fan	
13	Pump carrier	003/05	73	Nut M 8 DIN 934	
14	Motor casing		74	Screw TCCE 6x20 DIN 912	
15	Screw TE 8x20 DIN 933		75	Disk movable guard fixed rod	011/05
16	Nut M8 DIN 934		76	Disk movable guard	010/05
17	Head carrying arm	005/05	77	Snap ring D.45 DIN 471	
18	Motor flange		78	Head lever handle	046/05
19	Key 7x8x30 DIN 6885		79	Dowel 8x35 DIN 914	
20	Helical gear	019/05	80	Jet-breaker	020/05
21	Head	008/05	81	Pedestal	001/71
22	Head lever	039-A/05	82	Screw TE 10x25 DIN 933	
23	Screw TCCE 8x20 DIN 912		83	Washer D.10 DIN 125/A	
24	Washer		84	Mobile antifraze bracket	030/05
25	Disk fastening screw	018/05	85	Fixed antifraze bracket	025/05
26	Disk shaft	016/05	86	Nut M 14 DIN 934	
27	Disk flange	017/05	87	Screw TCCE 6x20 DIN 912	
28	Splash guard 30-40-7	044/05	88	Filter FB 1	045/05
29	Disk guard	009/05	89	Movable guard rod	012/05
30	Water pipe		90	Oil filling cap	
31	Washer		91	Flange rear motor	
32					
33	A.C. Pump	041/05			
34	Oil level plug				
35	Pointed dowel 6x10 DIN 914				
36	Pin head	023/05			
37	Graduated scale	024/05	200	Box Cover box	066/90 067/90
38	Screw TCCE 6x12 DIN 912		201	Plate	069/90
39	Disk		202	Omega raceway	
40	Screw TE 8x30 DIN 933		203	Changeover switch	011/90
41	Screw TE10x40 DIN 933		204	RH screw M4x14 DIN 7981	
42	Bench	001/05	205	HSHC screw M4x6 DIN 912	
43	Countervice	015/18	206	Fuse blok PCH 3x38	092/90
44	Bar stopped rod	031/05	207	Contact	
45	Bar stopped	004/05	208	Emergency button	085/90
46	Bar stopped knob	077/25	209	TBEI screw M4x6 ISO 7380	
47	Dowel 6x10 DIN 914		210	Remote controlled switch	032/90
48	Countervice pin	026/05	211		
49	Bench lever nut	032/95	212	Main switch	002/90
50	Bench lever	002/05	213		
51	Dowel 6x10 DIN 914		214	RH screw M4x14 DIN 7981	
52	Screw TCCE 6x16 DIN 912		215	Fuse blok PCH 2x38	094/90
53	Screw TE 10x25 DIN 933		216	Fuse blok PCH 1x38	093/90
54	Elastic pin 16x16 DIN 1481		217	Transformer 20 VA	092/90
55	Vice handwheel	029/03	218	Micro switch of handle	028/90
56	Bush		219	HSFHC screw M4x8 DIN 7991	
57	Elastic pin 8x36 DIN 1481		220	Electrical cable 2x1	
58	Vice screw	013/05	221	RH screw M2,9x13 DIN 7981	
59	Vice	016/18	222	Button	
60	Vice ljaw	029/05			

12. LAYING OFF AND DISMANTLING
12.1 LAYING OFF

If the machine is to be laid off or left idle for a long period, the following operations must be carried out:

1. Disconnect the machine from the electricity mains.
2. Empty oil from the gear box and cooling liquid from its tank
3. Clean carefully the machine by getting rid of all traces of grease, especially on the worked parts that must be protected with anti-oxidants.
4. Cover the machine with a sheet, preferably not plastic as it can cause rust due to the humidity condensation.
5. Store the machine in a closed, dust-free place.

12.2 DISMANTLING

If the machine must be definitively dismantled, its components must be sub-divided for the purpose of a possible recycle of the materials and for the environment safety. The following table is given for your guidance:

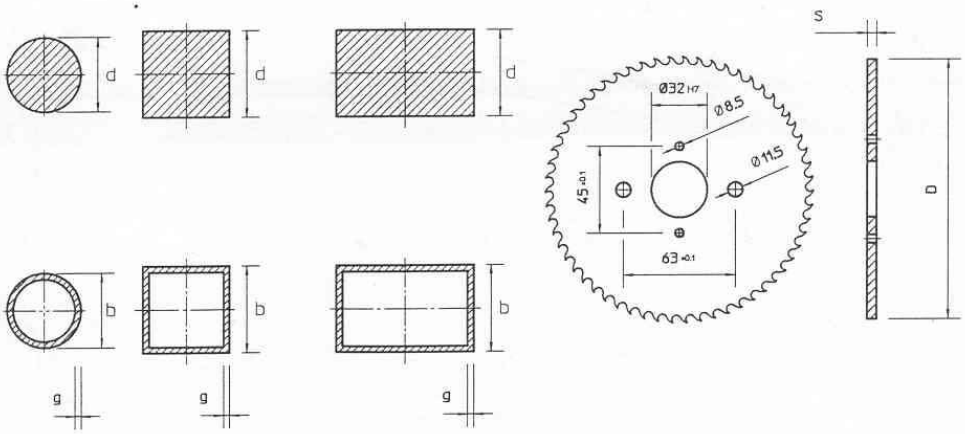
Steel	Light alloy	Cast iron	Bronze Copper	Plastic	Various
Bolts	Cylinders	Structural parts	Motors winding		
Springs				Seals	
Flanges	Gearboxes			Flexible pipes Gaskets	
Pins, pivots			Bushings		Friction items

Used oil and materials must be disposed of according to 75/439/EEC and 87/101/EEC Directives and to country specific regulations

▲ ▲ ▲ ▲ ▲ ▲

Scelta delle seghe - Blade selection
Choix des Fraises scie - Wahl der Sageblatter

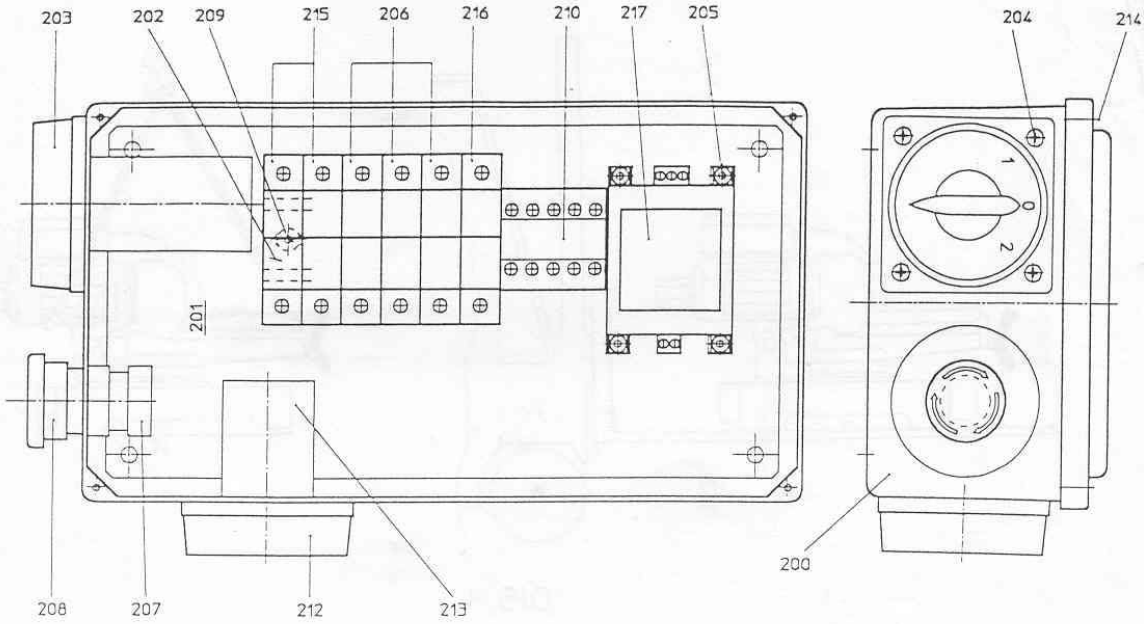
Diametro - Diameter Diametre - Durchmesser		200	225	250	275	300	315	350
Spessore - Thickness Epaisseur - Dicke		1,8	1,8	2	2,5	2,5	2,5	3
b= 10 - 80	t	3	3	3	3	3	3	3
g = ⩽ 2	z	200	230	250	280	300	320	350
b= 10 - 80 g= 2- 4 d=10 - 18	t	5	5	5	5	5	5	5
	z	130	140	160	170	190	200	220
b= 20 - 80 g= 4-10 d=18 - 30	t	8	8	8	8	8	8	8
	z	80	90	100	110	120	120	140
d= 30- 40	t	10	10	10	10	10	10	10
	z	60	70	80	90	90	100	110
d>40	t	//	//	//	12	12	12	12
	z	//	//	//	70	80	80	90



Si garantisce il funzionamento ottimale della vite-corona utilizzando seghe con fori di trascinamento.
Best performance of worm screw worm wheel gearing is guaranteed when circular saw blades with drawing-holes are used
Nous garantissons le bon fonctionnement de la vis et couronne seulement si l'on emploie des fraise-scies avec trous d'entrainement.
Die verwendung von Sageblattern mit Mitnehmerlochern sichern den guten Betrieb der Schnecke und des Scheckenkranzes.

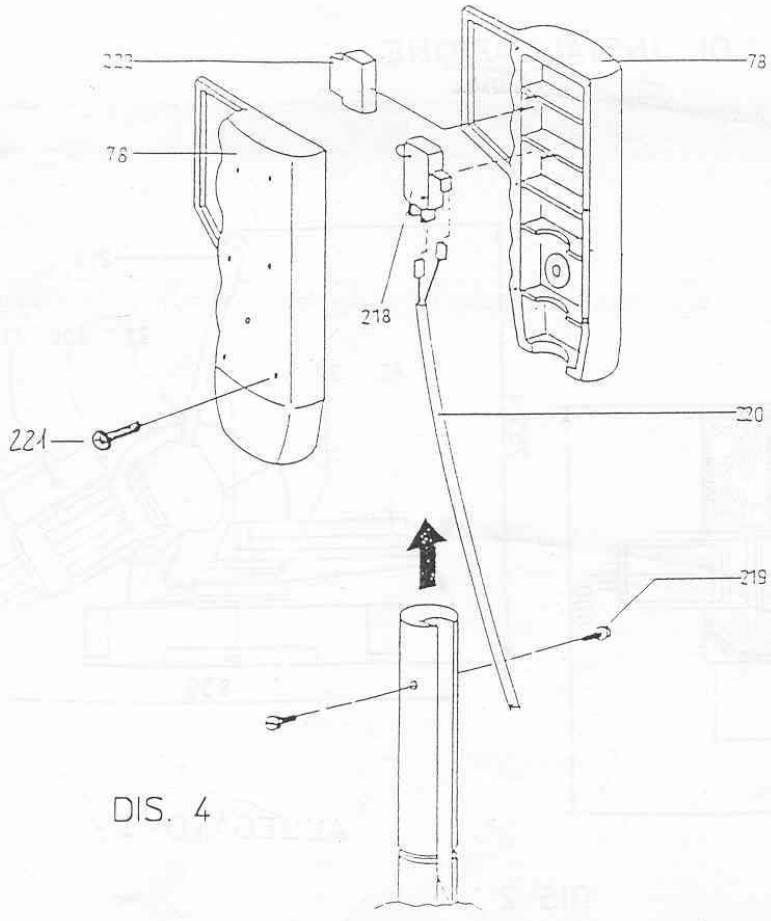
b= diametro esterno/altezza (tubi) – outside diameter/height (pipe)
diametre extérieur/hauteur (tube) – aussendurchmesser/hohe (rohr)
d= diametro/altezza (pieni) – diameter/height (solid)
diamètre/hauter (plein) – durchmesser/hohe (voll)
g= spessore del tubo – pipe thickness
epaisseur du tube – rohrdicke
t= passo dentatura – toothing pitch
pas denture – entfernung verzahnung
z= numero di denti – number of teeth
numero de dents - zahnnummer

ALLEGATO - 1 -



DIS. 3

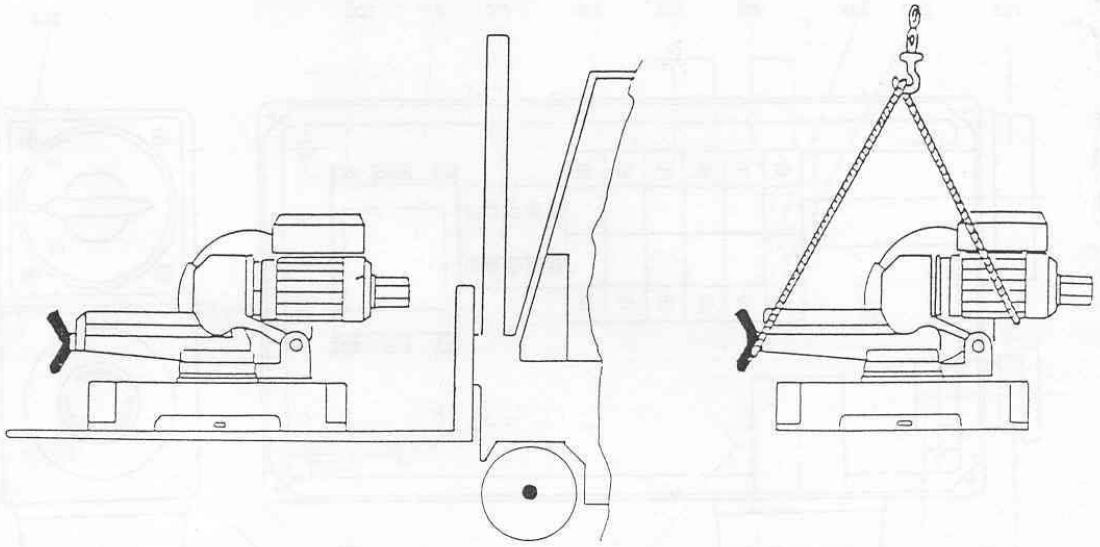
Cassetta Impianto elettrico
Electric Box
Boîte Eléctrique
Schaltkasten
Caja Eléctrica



DIS. 4

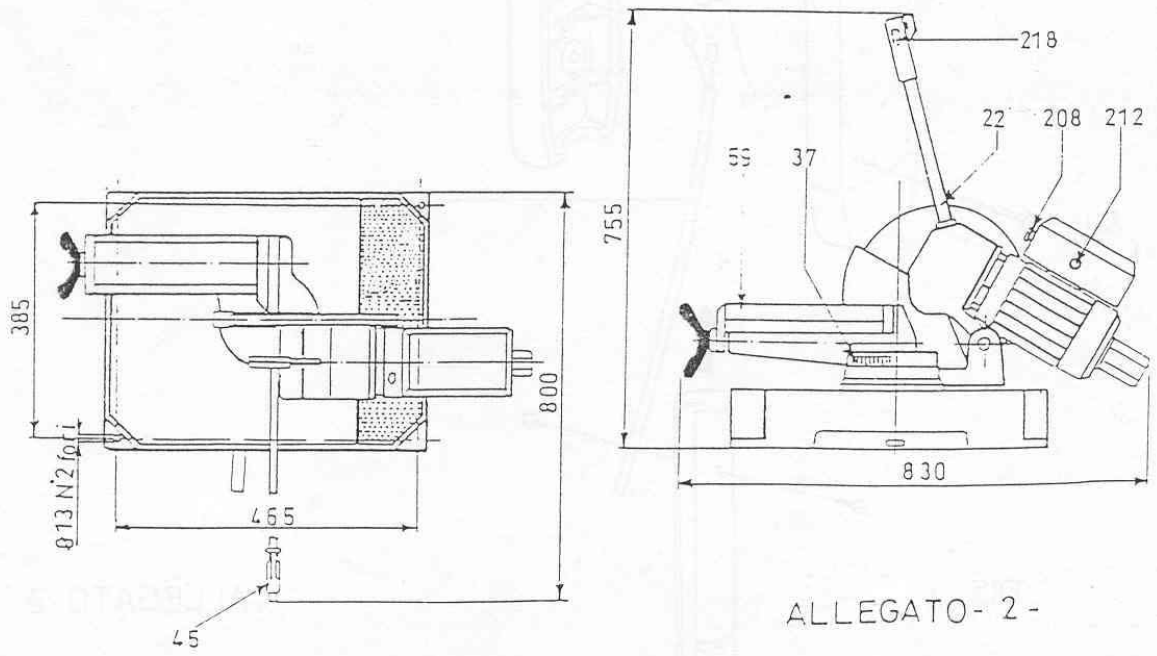
ALLEGATO 2

MOVIMENTAZIONE E TRASPORTO



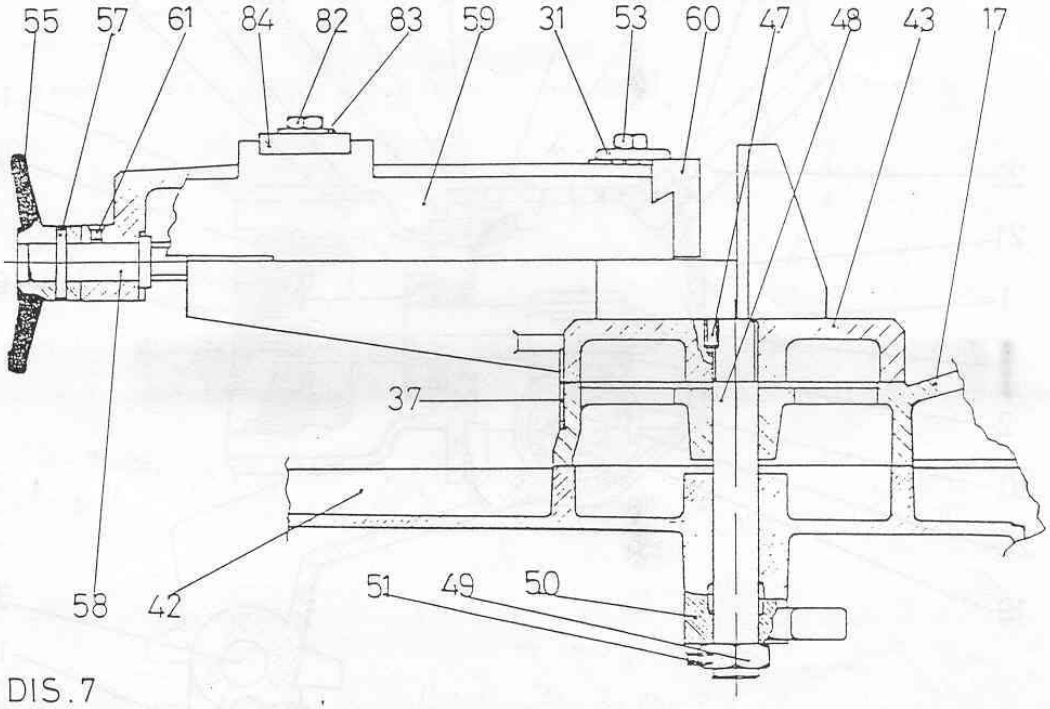
DIS. 1

PIANO DI INSTALLAZIONE



ALLEGATO - 2 -

DIS. 2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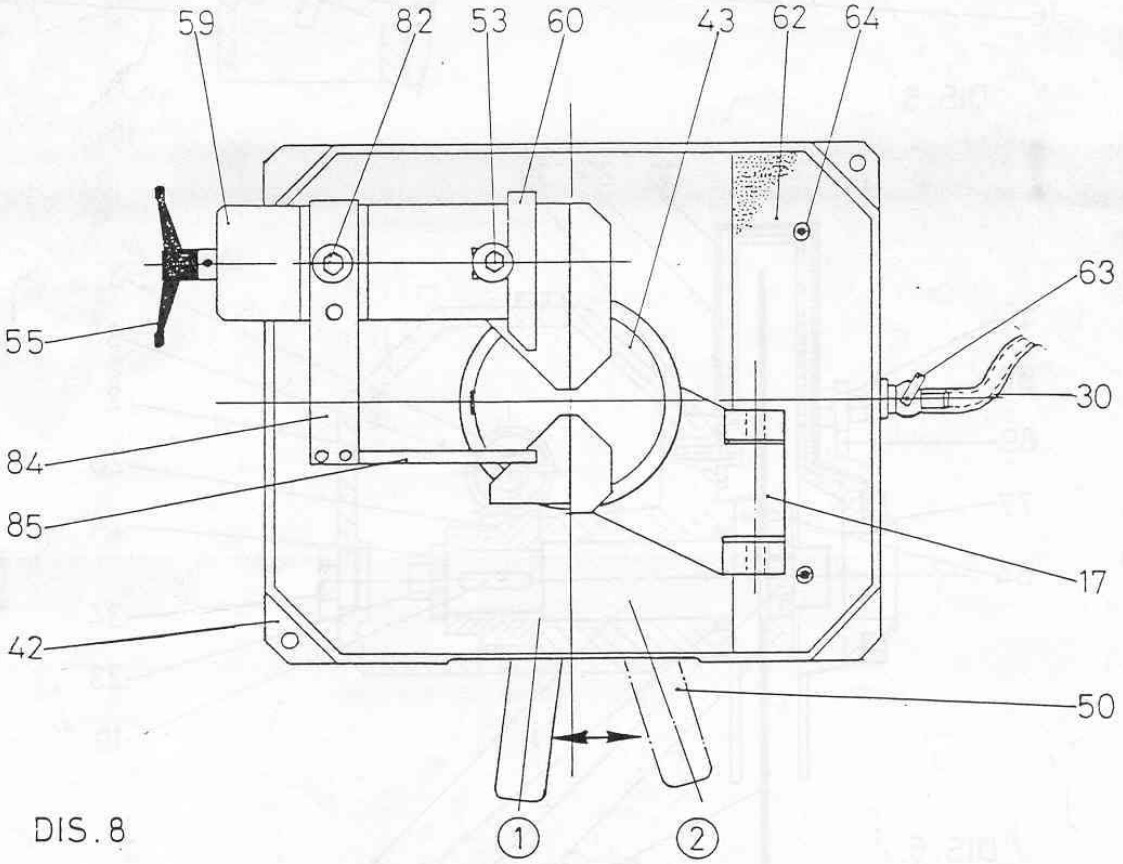
DIS. 7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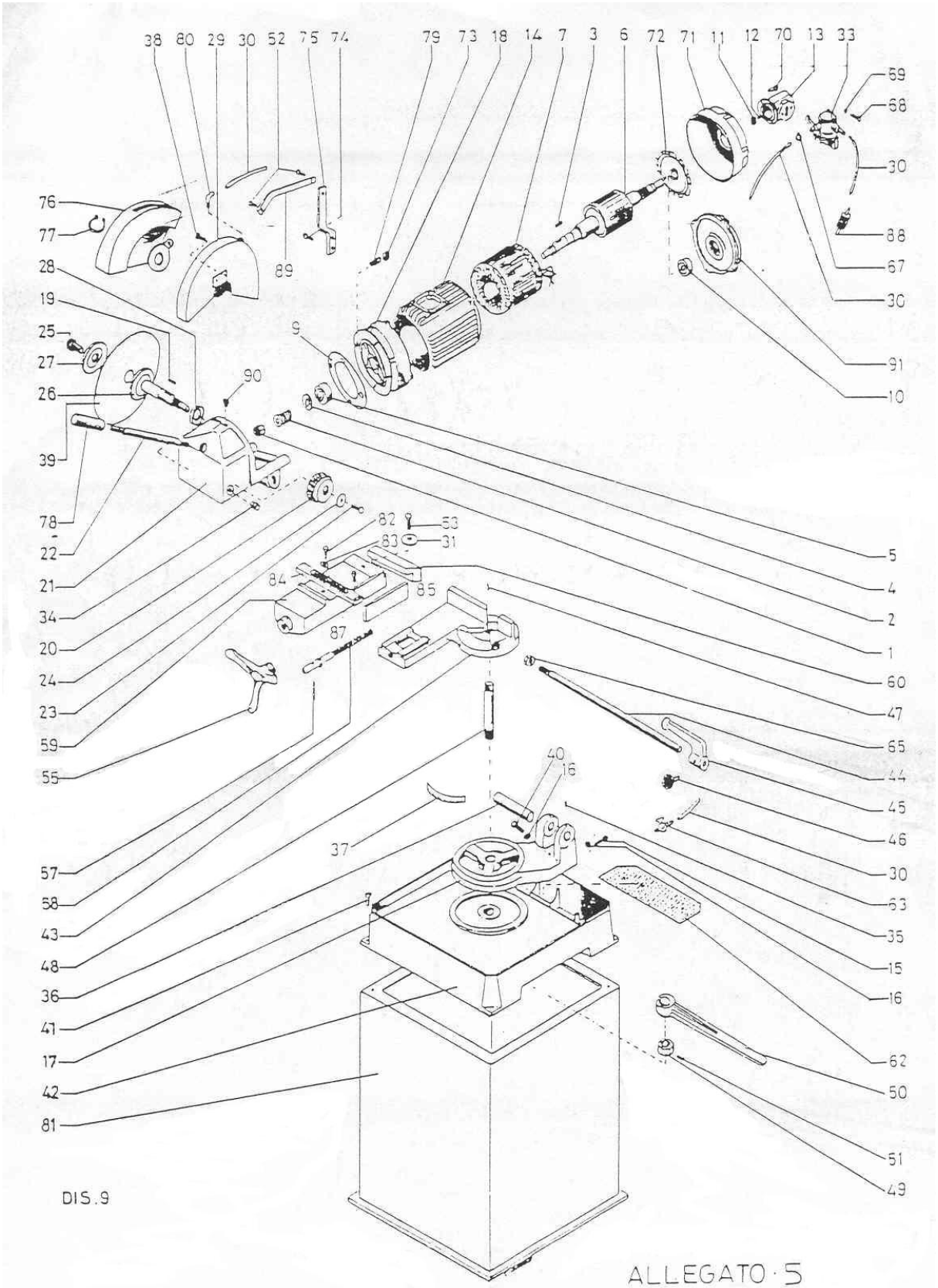
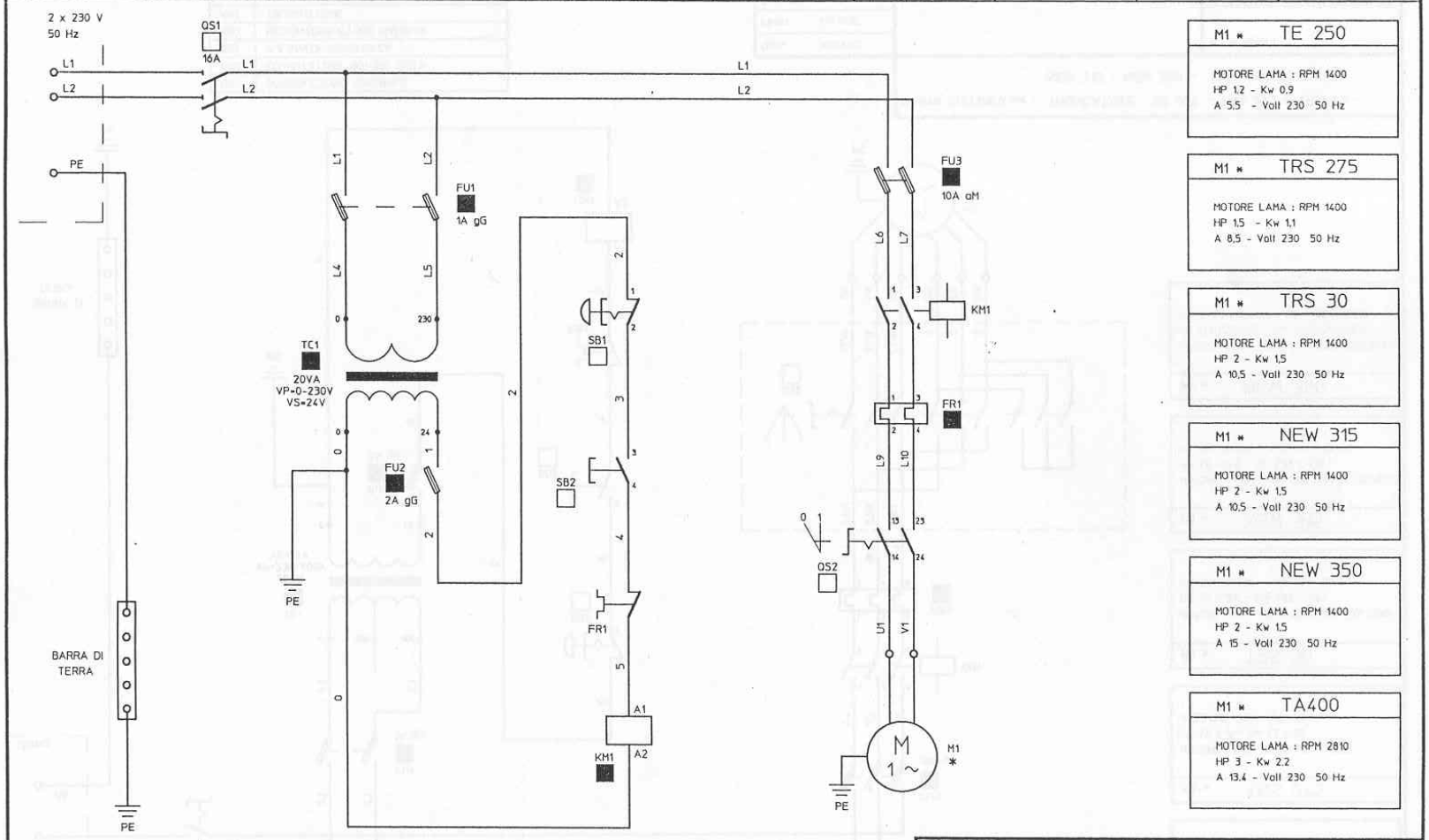
1
2

DIS. 8



DIS.9

ALLEGATO · 5



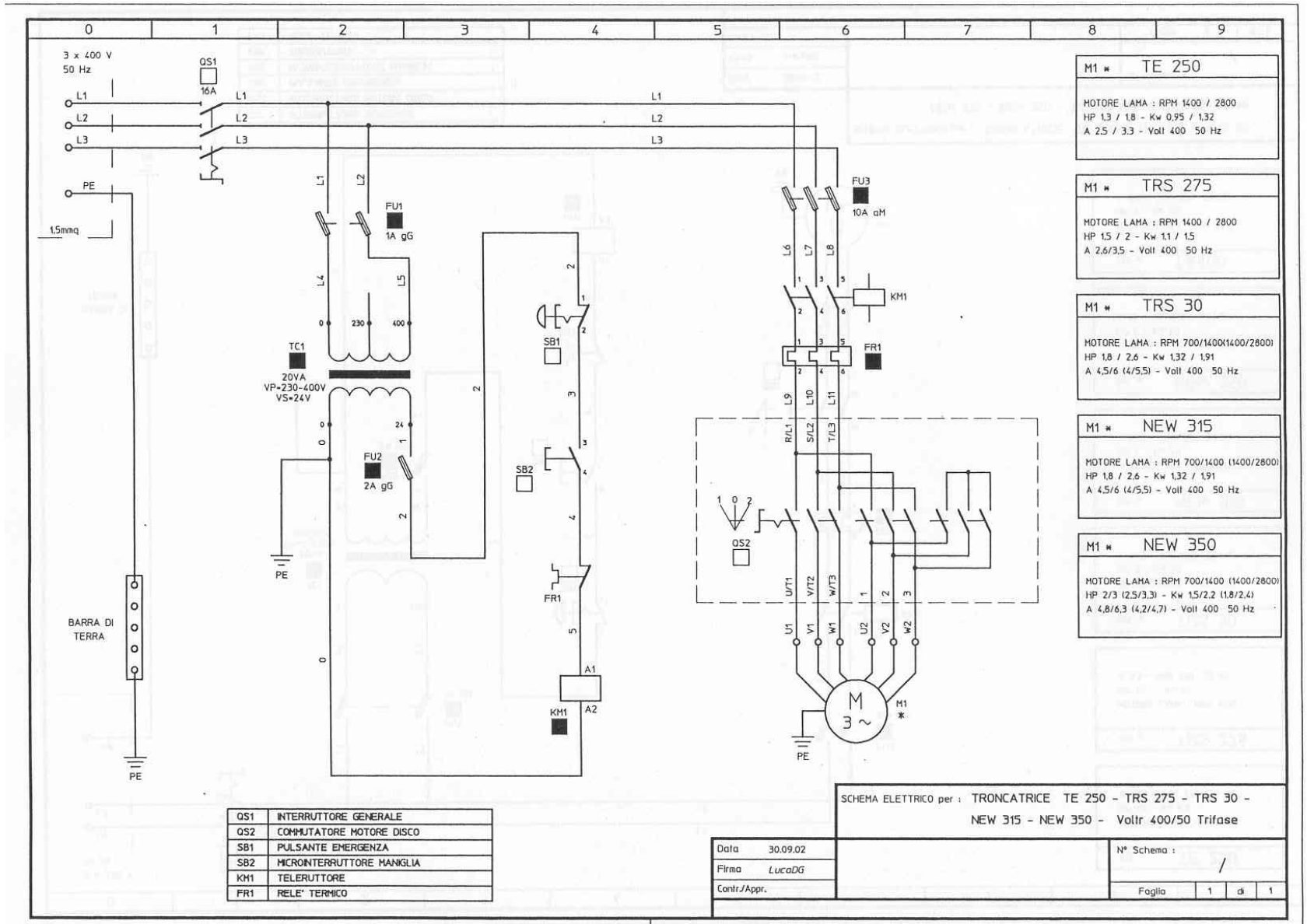
QS1	INTERRUTTORE GENERALE
QS2	INTERRUTTORE MOTORE DISCO
SB1	PULSANTE EMERGENZA
SB2	MICROINTERRUTTORE MANIGLIA
KM1	TELERUTTORE
FR1	RELE' TERMICO

SCHEMA ELETTRICO per : TRONCATRICE TE 250 - TRS 275 - TRS 30
NEW 315 - NEW 350 - TA 400 Volt 230/50 Monofase

Data	30.09.02
Firma	LucaDG
Contr./Appr.	

N° Schema : /

Foglio 1 di 1



QS1	INTERRUTTORE GENERALE
QS2	COMMUTATORE MOTORE DISCO
SB1	PULSANTE EMERGENZA
SB2	MICROINTERRUTTORE MANIGLIA
KM1	TELERUTTORE
FR1	RELE' TERMICO

SCHEMA ELETTRICO per : TRONCATRICE TE 250 - TRS 275 - TRS 30 - NEW 315 - NEW 350 - Voltr 400/50 Trifase

Data	30.09.02
Firma	LucaDG
Contr./Appr.	

N° Schema : /

Foglio 1 di 1